ABSTRACT

Apparatus including a plurality of droplet ejection devices, an electric source and a controller. Each droplet ejection device includes a fluid chamber having an ejection nozzle, an electrically actuated displacement device associated with the chamber, and a switch having an input connected to the electric source, an output connected to the electrically actuated displacement device, and a control signal input that is controlled by the controller to control whether the input (and thus the electric source) is connected to the output (and thus the electrically actuated device). The electrically actuated displacement device moves between a displaced position and an undisplaced position to change the volume of the chamber as a capacitance associated with the electrically actuated displacement device changes in charge between an actuated condition and an unactuated condition. The controller provides respective charge control signals to respective control signal inputs to control the extent of change in charge on respective capacitances by the time that the respective switch connects the electrical signal to the respective electrically actuated displacement device.

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